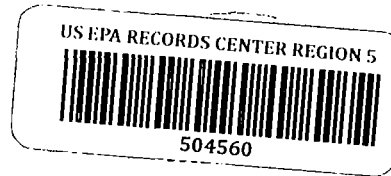
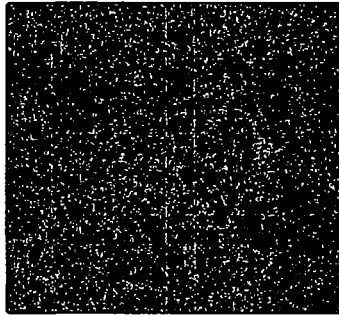




DATE: May 15, 1986
TO: Glen Savage
FROM: Dorothy L. Bennett *DLB*
SUBJECT: Arsenic Contamination



The following private wells located in Tazewell County were found to have arsenic contamination equal to or in excess of the maximum allowable concentration for drinking water:



0.052 mg/l As
0.060 mg/l As
0.089 mg/l As
0.080 mg/l As
0.083 mg/l As
0.086 mg/l As
0.086 mg/l As
0.079 mg/l As
0.076 mg/l As

Arsenic is a metallic element which occurs naturally in the earth's crust. It is also a by-product of refining of metal ores, particularly copper, glass production plants, and from burning of some coals. It is also a normal constituent of some foods, including seafoods, meat, poultry, grain and cereal.

Arsenic is readily absorbed from the digestive tract and distributes throughout the body. However it clears quickly from most areas except from the brain and skin. There is evidence that arsenic is an essential element for some animal species, and potentially for humans. If so, the necessary levels would be approximately in the 0.025 to 0.05 mg range. Because this issue is not resolved, the NAS felt that the present maximum allowable concentration of 0.05 mg/l should be maintained.

There is some evidence which indicates that long-term exposure to arsenic may result in skin cancer. One of the most characteristic effects of chronic arsenic exposure is skin disorder beginning with hyperpigmentation and keratosis. This may develop into squamous cell or basal cell carcinoma. Animal experiments have not been consistent in producing these results. Other investigations have also produced conflicting results.

For these reasons, we recommend that the water which exceeds 0.05 mg/l arsenic should not be used for drinking or cooking.

PEKIN, ILLINOIS LANDFILL

